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MEMORANDUM AND RECOMMENDATION
OF THE
PRESIDENT OF THE
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
TO THE
EXECUTIVE DIRECTORS
ON A
PROPOSED LOAN
IN AN AMOUNT EQUIVALENT TO US\$30.0 MILLION
TO THE
REPUBLIC OF KOREA
FOR A
VOCATIONAL EDUCATION PROJECT

FEBRUARY 15, 1991

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CURRENCY EQUIVALENTS
(As of February 1991)

Currency Unit = Korean Won (W)
US\$1.00 = W 710

WEIGHTS AND MEASURES

Metric System

FISCAL YEAR

January 1 - December 31

ACADEMIC YEAR

March - February

ABBREVIATIONS

BE	-	Board of Education
ICB	-	International Competitive Bidding
LCB	-	Local Competitive Bidding
MOE	-	Ministry of Education
O&M	-	Operations and Maintenance
VHS	-	Vocational High School

KOREAVOCATIONAL EDUCATION PROJECTLoan and Project Summary

<u>Borrower:</u>	Republic of Korea
<u>Beneficiaries:</u>	Not applicable
<u>Amount:</u>	US\$30.0 million equivalent
<u>Terms:</u>	Repayable in 15 years including 5 years at the Bank's standard variable interest rate
<u>On-lending Rate:</u>	Not applicable
<u>Financing Plan:</u>	Government US\$13.3 million IBRD US\$30.0 million <u>Total</u> <u>US\$43.3 million</u>
<u>Economic Rate of Return:</u>	Not applicable
<u>Staff Appraisal Report:</u>	Report No. 8966-KO
<u>Map:</u>	IBRD No. 22680

MEMORANDUM AND RECOMMENDATION OF THE PRESIDENT
OF THE INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
TO THE EXECUTIVE DIRECTORS
ON A PROPOSED LOAN TO
THE REPUBLIC OF KOREA
FOR A VOCATIONAL EDUCATION PROJECT

1. The following memorandum and recommendation on a proposed loan to the Republic of Korea for US\$30.0 million equivalent is submitted for approval. The proposed loan would be repayable in 15 years including 5 years of grace at the Bank's standard variable interest rate and would help finance a vocational education project.
2. Background. Investment in education and training at all levels has played a prominent part in Korea's remarkable growth over the past three decades. Vocational education and training have contributed to this effort by providing the skilled craftsmen which constitute the foundation of the skill pyramid. In Korea, a distinction is made between vocational education and vocational training although both systems produce skilled craftsmen. Vocational training, which is carried out in 74 public and 187 private vocational training institutes, focuses on providing craftsman training for school leavers. Vocational education is undertaken in 315 public and 273 private vocational high schools (VHSs) which are part of the secondary education system (along with general high schools) under the control of the Ministry of Education (MOE). VHS students continue their general education while pursuing vocational specializations. Selected VHSs will be assisted under the proposed project.
3. Overall management of the VHS system is vested in MOE with local administration being the responsibility of nine provincial and six city boards of education (BEs). MOE allocates budgetary resources through the BEs and, through them, also exercises control over standards in both the public and private schools relating to equipment, teacher qualifications, curricula, student/teacher ratios, etc. Well-established mechanisms exist within the VHS system for the periodic review and revision of curricula and associated changes in textbooks and equipment lists. These reviews are carried out by a broad spectrum of experts and include inputs from industry to ensure that curricula remain relevant to employers' needs. The fifth such review has recently been completed and revisions are currently being implemented. These focus on placing some additional emphasis on science and English and the introduction of a data processing course. The overall staffing of the schools is generally satisfactory and teachers are for the most part well-qualified and experienced.
4. Employment rates for VHS graduates are high--82 percent of the 1989 graduates were employed, 7 percent unemployed with the remainder entering higher education or military service. Nevertheless, in spite of the high level of external efficiency in the VHSs and the satisfactory situation regarding curricula and staffing, weaknesses exist in equipment provision in the schools. Standard equipment lists exist for each specialization taught in the VHSs but no school has been able to achieve full equipment status; most

schools average in the 40-60% range. The range of equipment in the schools is reasonably consistent with the curricula. The problem lies in shortages in the numbers of equipment items. The schools have responded by tightly scheduling the use of equipment and while this leads to efficient utilization rates, it has also led to some loss in the quality of learning because of crowding in the use of equipment by students. Furthermore, the recent review of equipment which followed the curricular review, indicated that teaching equipment in school workshops is not being modernized at a sufficient rate to keep up with changing technology in the workplace. At earlier stages of Korea's development, the pace of technology development was quite slow, relying mainly on mastering relatively unsophisticated imported technology. This allowed sufficient time for the vocational training system to adapt to changes in the skill structure and training needs of the labor market. However, as the rate of technology development has accelerated, the sophistication of industrial equipment has outpaced the acquisition of comparable equipment for training purposes in the vocational high schools. Consequently there is a need to update equipment in the schools to ensure that they can continue to train skilled workers to the level required by industry.

5. Rationale for Bank Involvement. The proposed project continues Bank assistance in the field of technical and scientific training which has encompassed six operations over the past two decades. Early lending focussed on craftsman and technician training and then shifted its emphasis to higher level training of engineers and scientists in line with the demands of Korea's rapid technological development. Appropriate emphasis was also placed on improving the policy framework for technical and scientific training. The Bank's operations have been consistent with the Government's priorities and evaluation reports indicate that projects were implemented efficiently and successfully contributed to improving the quality of technical and scientific training and strengthening the policy framework in this field. The proposed project is reverting to assistance to vocational training in recognition of the need for the training system to keep pace with the demand for increasingly complex craftsman-level skills in the labor market. Bank assistance is still required to fill gaps in investment programs of educational institutions which traditionally have relied on external financing to meet equipment upgrading needs. Furthermore, the Bank's involvement in project design and appraisal brings value-added to the Ministry of Education through helping to strengthen its capabilities in these areas. The Bank brings continuity to the project development process and has developed criteria-based procedures and documentation which not only allow projects to be designed more efficiently, which benefits MOE, but which may also have wider application in the future as Korea becomes a donor supporting educational development elsewhere.

6. Project Objectives. The overall objective of the project is to assist in upgrading the skill training provided in selected vocational high schools to ensure that their graduates continue to meet the increasingly complex skill requirements in industry, commerce, agriculture and fisheries. The project would assist in making VHS graduates more productive upon entering employment and better able to adjust to rapidly changing technological processes.

7. Project Description. The proposed project, to be carried out over a period of five years, would finance specialized equipment for four types of

VHS--technical, commercial, agricultural and fisheries/marine. The Government would finance complementary inputs related to making the equipment operational and maintaining it thereafter, namely transportation and installation costs, O&M and consumables. The equipment needs of all VHSS have been surveyed. Schools would be selected for participation in the project by the local boards of education (BEs) according to specific criteria. Each BE would be responsible for recommending to MOE the amount and type of equipment for each participating school. Equipment for each school would be procured partly to meet some of the shortfall in standard equipment items and partly for updated equipment needed to teach more advanced technologies. The proportions would vary according to the needs of each school. Both public and private schools would have equal opportunities for participating in the project. Private schools would not be required to repay loan funds but would receive such funds as budget transfers from MOE through the BEs. The proposed loan would finance about 95% of the estimated foreign exchange cost of the project or about 69% of total project cost net of duties and taxes. Overall responsibility for project implementation would lie with the Ministry of Education with its Education Facilities Bureau handling the detailed activities. Equipment procurement would be undertaken by the Office of Supply, Republic of Korea in conjunction with MOE and the BEs. It is estimated that about 85% of equipment to be financed under the project would be procured under ICB. A breakdown of costs and the financing plan are shown in Schedule A. Amounts and methods of procurement and of disbursements, and the disbursement schedule are shown in Schedule B. A timetable of key project processing events and the status of Bank Group operations in Korea are given in Schedules C and D, respectively. A map is also attached. The Staff Appraisal Report No. 8966-KO, dated February 15, 1991, is being distributed separately.

8. Agreed Action. The Government has agreed that schools would be selected for participation in the project according to criteria acceptable to the Bank.

9. Benefits. The project would upgrade the quality of skill training provided in the vocational high schools, enhancing the value of their graduates to prospective employers by increasing their usefulness immediately upon graduation and by improving their ability to adjust to technological change in the workplace. Thus, the continued employability of vocational high school graduates would be enhanced, and the productivity of the sectors in which the graduates were employed would be improved.

10. Risks. There are no major risks associated with the project.

11. Recommendation. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Bank and recommend that the Executive Directors approve the proposed loan.

Barber B. Conable
President

Attachments

Washington, D.C.
February 15, 1991

KOREAVOCATIONAL EDUCATION PROJECTEstimated Costs and Financing Plan

<u>Estimated Costs /a</u>	<u>Local</u> -----	<u>Foreign</u> (US\$ million)	<u>Total</u> -----
Technical Schools	5.4	15.8	21.2
Commercial Schools	2.2	6.6	8.8
Agricultural Schools	1.3	3.8	5.1
Fisheries Schools	0.4	1.3	1.7
<u>Base Cost</u>	<u>9.3</u>	<u>27.5</u>	<u>36.8</u>
Physical Contingencies	0.5	1.4	1.9
Price Contingencies	1.9	2.7	4.6
<u>Total Project Cost /a</u>	<u>11.7</u>	<u>31.6</u>	<u>43.3</u>
<u>Financing Plan:</u>			
Government	11.7	1.6	13.3
IBRD	-	30.0	30.0
<u>Total</u>	<u>11.7</u>	<u>31.6</u>	<u>43.3</u>

/a Does not include duties, taxes and fees estimated at US\$2.3 million.

KOREAVOCATIONAL EDUCATION PROJECT

Procurement Method and Disbursements
 (US\$ million, including contingencies)

Category of Expenditure	Procurement Method /a				Total Cost
	ICB	LCB	Other /b	N/A	
Equipment	25.5 (25.5)	-	4.5 (4.5)	-	30.0 (30.0)
Equipment transportation and installation	-	-	-	1.9 (0.0)	1.9 (0.0)
Operations and maintenance	-	-	-	5.7 (0.0)	5.7 (0.0)
Consumable materials	-	-	-	5.7 (0.0)	5.7 (0.0)
<u>Total</u>	<u>25.5</u> (25.5)	-	<u>4.5</u> (4.5)	<u>13.3</u> (0.0)	<u>43.3</u> (30.0)

Disbursements

<u>Category</u>	<u>Amount</u>	<u>% of expenditures to be financed</u>
Equipment	30.0	100% of foreign expenditures for imported equipment or, 100% of local expenditures (ex-factory cost) for locally manufactured equipment; 65% of local expenditures for other equipment procured locally.

Estimated IBRD Disbursements

<u>Bank FY</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>
Annual	2.0	10.0	10.0	6.0	1.5	0.5
Cumulative	2.0	12.0	22.0	28.0	29.5	30.0

/a Figures in parentheses are the amounts to be financed by the loan.

/b Includes international and local shopping.

KOREA

VOCATIONAL EDUCATION PROJECT

Timetable of Key Project Processing Events

(a) Time taken to prepare:	4 months
(b) Prepared by:	Government
(c) First IBRD mission:	February 1990
(d) Appraisal mission departure:	June 10, 1990
(e) Negotiations:	February 1991
(f) Planned date of effectiveness:	July 1991
(g) List of relevant PCRs and PPARs:	First Education Project (Cr. 151-KO), PPAR No. 1801, November 22, 1977. Second Education Project (Ln. 906/Cr. 394-KO), PPAR No. 4509, May 24, 1983. Third Education Project (Ln. 1096-KO), PPAR No. 4544, June 14, 1983. Fourth Education Project (Ln. 1474- KO), PCR No. 5516, March 8, 1985. Sector Program on Higher Technical Education (Ln. 1800-KO), PPAR No. 7252, May 24, 1988. Electronics Technology Project (Ln. 1676-KO), PCR, October 21, 1988.

THE STATUS OF BANK GROUP OPERATIONS IN THE REPUBLIC OF KOREA

A Statement of Bank Loans and IDA Credits ^a
(As of September 30, 1990)

Loan or Credit Number	Fiscal Year	Borrower	Purpose	Amount (\$ million) (less cancellations)		
				Bank	IDA	Undisbursed
Eighty-one loans and nine credits fully disbursed				5,681.43	115.58	
Of which SECALs, SALs, and Program Loans						
2071	1982	Republic of Korea	Structural Adjustment Loan	250.00		
2354	1984	Republic of Korea	Structural Adjustment Loan II	<u>300.00</u>		
				550.00		
2491	1985	Republic of Korea	Water Supply III	90.00		1.73
2514	1985	SMG	Seoul Urban Transportation	28.76		9.66
2571	1985	Republic of Korea	Second Industrial Finance	183.12		4.74
2600	1986	Republic of Korea	Seoul-Busan Corridor	34.60		3.59
2615	1986	Republic of Korea	Water Supply IV	34.13		0.12
2726	1986	Republic of Korea	Ports III	134.50		23.96
2905	1988	Republic of Korea	Kyunggi Regional Transport	116.00		50.76
2908	1988	Taegu City Government	Taegu Urban Transport	30.00		24.58
2913	1988	Korea Technology Corp.	Third Technology Development	50.00		8.97
3037	1989	Republic of Korea	Technology Advancement	16.40		14.60
3061	1989	Republic of Korea	Road Improvement	200.00		199.97
3178	1990	Republic of Korea	Juam Water Supply	34.00		34.00
3202	1990	Republic of Korea	Technology Advancement II	31.60		31.60
3203	1990	Republic of Korea	Science Technology Research	<u>45.00</u>		<u>45.00</u>
Total				6,648.42	115.58	453.28
of which has been repaid				<u>3,629.32</u>	<u>17.13</u>	
Total now held by Bank and IDA				<u>3,019.10</u>	<u>98.45</u>	
Amount sold 131.51						
of which repaid <u>86.56</u>						
Total undisbursed				453.28	-	453.28

^a The status of the projects listed in Part A are described in a separate report on all Bank/IDA-financed projects in execution, which is updated twice yearly and circulated to the Executive Directors on April 30 and October 31.

B Statement of IFC Investments
(As of September 30, 1990)

Fiscal Year	Obligor	Type of Business	Loan	Equity (US\$million)	Total
1968	KLB (KDFC)	Development Financing	-	0.7	0.7
1969	Honam Silk Co	Textiles	1.4	0.3	1.7
1970	Atlas Paper	Pulp and Paper	4.5	0.5	5.0 ^a
1971	Korea Investment Finance Corp	Capital Market Development	-	0.7	0.7
1974	KLB (KDFC)	Development Financing	-	0.4	0.4
1974	Korea Investment Finance Corp	Capital Market Development	-	0.3	0.3
1975	Gold Star & Co. Ltd	Electronic Products	16.0	1.3	17.3
1975	Korea Securities Finance Corp	Capital Market Development	5.0	0.6	5.6
1975	Tong Yang Nylon Co. Ltd.	Synthetic Fibers	6.9	5.1	12.0
1975	Hae Un Dae Dev. Co. Ltd. (Busan)	Tourism	2.8	1.2	4.0
1976	Korea Investment Finance Corp.	Capital Market Development	-	0.4	0.4
1976/	Chonju Paper Mfg. Co	Paper	5.0	1.0	6.0
84/87					
1976/86	Korea Zinc Co. Ltd.	Zinc	21.0	5.6	26.6
1976	KLB (KDFC)	Development Financing	17.8	-	17.8
1976	Gold Star & Co. Ltd	Electronic Products	10.0	0.4	10.4
1977	Gold Star and Co. Ltd	Electronic Products	-	0.2	0.2
1977	KLB (KDFC)	Development Financing	-	0.3	0.3
1977	Korea Securities Finance Corp	Capital Market	-	0.5	0.5
1977	Korea Development Leasing Corp	Capital Market	15.0	0.4	15.4
1978	KLB (KDFC)	Development Financing	-	1.1	1.1
1979	Gold Star & Co. Ltd	Electronic Products	-	1.7	1.7
1979	KIFC	Capital Market	-	0.6	0.6
1979	Korea Development Leasing Corp	Capital Market	-	1.4	1.4
1979	Gold Star & Co. Ltd.	Electronic Products	-	1.5	1.5
1980/84	Gold Star & Co. Ltd	Electronic Products	-	19.8	19.8
85/87/					
88/89					
1980	Korea Investment Finance Corp.	Capital Market	-	0.6	0.6
1980/	Korea Securities Finance Corp.	Capital Market	-	2.3	2.3
82/84					
1980	KLB (KDFC)	Development Financing	-	21.1	21.1
1981	Taihan Bulk Terminal	Grain Port Terminal	7.0	2.5	9.5
1982/85/	KIFC	Capital Market	-	5.9	5.9
89					
1982	K-TAC (Korea Tech. Advancement Corp.)	Research & Development	-	0.6	0.6
1983/85	KDIC	Money & Capital Market	-	5.9	5.9
1984	Halla Cement	Cement Construction Material	4.3	3.9	8.2
1985/86	Korea Fund	Money & Capital Market	-	12.8	12.8
1987	Korea Business & Research Info	Money & Capital Market	-	0.1	0.1
1988	ANAN	General Manufacturing	-	15.8	15.8
1989	Oriental	Chemicals & Petrochemicals	-	15.2	15.2
Total gross commitments			116.7	132.7	249.4
Less cancellations, terminations, repayments and sales			<u>112.3</u>	<u>48.0</u>	<u>160.3</u>
Total commitment now held by IFC			4.4	84.7	89.1
Total undisbursed (including participant's portion)			-	2.7	2.7

^a Cancelled at the request of the Company.

